

# PATENT ABSTRACTS OF JAPAN

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## (54) CURRENT REGULATION CIRCUIT

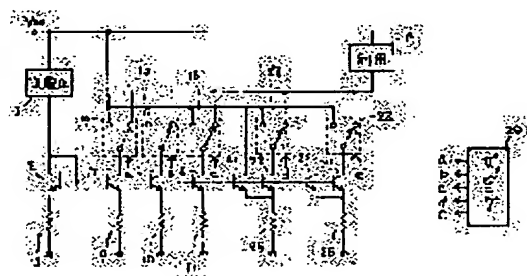
### (57)Abstract:

**PROBLEM TO BE SOLVED:** To prevent the increase of the chip area regardless of the addition of a new transistor TR when an IC is produced by using a differential pair which divides the working current flowing to the common emitter of a TR connected to a mirror in response to the size rate of the emitter.

**SOLUTION:** The switch signals (a) to (d) received from a zapping circuit 20 are applied to the switch circuits 14 to 16, 27 and 28 respectively. The

movable terminals of these switch circuits are switched toward the power voltage Vcc or a working circuit 19 according to the signals (a) to (d). The emitters are connected in common to each other between the TR 21 and 22 and also the TR 23 and

24, and the emitter sizes are set at 1:1 and 3:1 respectively for generation of the currents of 0.5·I1', and 0.25·I1. Therefore, a relational expression equal to the conventional one is obtained. Thus, it's possible to obtain a desired current Ia by controlling the circuit 20 to produce the signals (a) to (d) and controlling the combinations of switch circuits according to the signals (a) to (d).



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